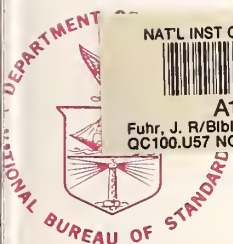


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NBS SPECIAL PUBLICATION 366

SUPPLEMENT 3

U.S. DEPARTMENT OF COMMERCE / National Bureau of Standards

Bibliography on Atomic Line Shapes and Shifts

(June 1975 through June 1978)

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1978
C.2

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The National Bureau of Standards¹ was established by an act of Congress March 3, 1901. The Bureau's overall goal is to strengthen and advance the Nation's science and technology and facilitate their effective application for public benefit. To this end, the Bureau conducts research and provides: (1) a basis for the Nation's physical measurement system, (2) scientific and technological services for industry and government, (3) a technical basis for equity in trade, and (4) technical services to promote public safety. The Bureau's technical work is performed by the National Measurement Laboratory, the National Engineering Laboratory, and the Institute for Computer Sciences and Technology.

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¹Headquarters and Laboratories at Gaithersburg, Maryland, unless otherwise noted; mailing address Washington, D.C. 20234.

²Some divisions within the center are located at Boulder, Colorado, 80303.

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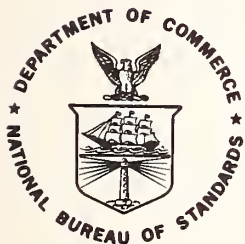
7

Bibliography on Atomic Line Shapes and Shifts

(June 1975 through June 1978)

J. R. Fuhr, B. J. Miller, and G. A. Martin

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National Bureau of Standards
Washington, D.C. 20234



U.S. DEPARTMENT OF COMMERCE, Juanita M. Kreps, Secretary

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Foreword

The National Standard Reference Data System was established in 1963 for the purpose of promoting the critical evaluation and dissemination of numerical data of the physical sciences. The program is coordinated by the Office of Standard Reference Data of the National Bureau of Standards but involves the efforts of many groups in universities, government laboratories, and private industry. The primary aim of the program is to provide compilations of critically evaluated physical and chemical property data. These tables are published in the *Journal of Physical and Chemical Reference Data*, in the NSRDS-NBS series of the National Bureau of Standards, and through other appropriate channels.

The task of critical evaluation is carried out in various data centers, each with a well-defined technical scope. A necessary preliminary step to the critical evaluation process is the retrieval from the world scientific literature of all papers falling within the scope of the center. Each center, therefore, builds up a comprehensive well-indexed bibliographical file which forms the base for the evaluation task. Bibliographies derived from these files are published when they appear to be of value to research workers and others interested in the particular technical area.

Further information on NSRDS and the publications which form the primary output of the program may be obtained by writing to the Office of Standard Reference Data, National Bureau of Standards, Washington, DC 20234.

David R. Lide, Jr., Chief
Office of Standard Reference Data

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BIBLIOGRAPHY ON ATOMIC LINE SHAPES AND SHIFTS

(June 1975 through June 1978)

J. R. Fuhr, B. J. Miller, and G. A. Martin

This is the third supplement to the NBS Special Publication 366, *Bibliography on Atomic Line Shapes and Shifts (1889 through March 1972)*. It contains about 600 references and covers the literature from June 1975 through June 1978. As before, the bibliography contains five major parts: (1) All general interest papers are catalogued according to the broadening mechanisms (and, further, according to special topics under several of the mechanisms) and as to whether the work is a general theory, a general review, a table of profiles or parameters, a comment on existing work, a study of general experimental measurement techniques, or an experimental effort of general importance. Also included are selected papers on important applications of line broadening and on miscellaneous topics relating to atomic spectral line shapes and shifts. (2) In Part 2 all papers containing numerical data are ordered as to element, ionization stage, and broadening mechanism (in the case of foreign gas broadening the perturbing species are listed), and it is indicated whether the data are experimentally or theoretically derived. (3) While in the two preceding parts of the bibliography the references are listed for brevity by identification numbers only, in Part 3 all references are listed completely by journal, authors, and title and are generally arranged by year of publication and alphabetically by authors' names within the year. (4) This section contains a list of all authors and their papers. (5) A final section provides corrections or additions to the second supplement to the original bibliography.

Key words: Atomic; instrumental broadening; line shapes; line shifts; pressure broadening; resonance broadening; Stark broadening; van der Waals broadening.

A. INTRODUCTION

Since the publication of our latest *Bibliography on Atomic Line Shapes and Shifts (July 1973 through May 1975)*,¹ which is the second supplement to our original bibliography,² the number of articles containing numerical data, reviews, or comments of general interest has again increased sufficiently as to warrant a new supplement. The arrangement of the preceding bibliographies is generally retained. This third supplement, containing about 600 references, includes all new papers that were received in the

NBS library before June 30, 1978. A few recently collected articles, which were published prior to 1975, are listed in Part 3 under the year of publication. Since we feel that our collection of articles for the year 1975 is now reasonably complete, all references for that year have been renumbered for this supplement and are listed here with the new numbers. As in the previous supplements, we have provided an errata section, consisting of corrections and additions to Supplement 2 to the original bibliography. References to English translations of previously cited Russian articles are also listed in this final section.

We would like to express our sincere thanks to Dr. D. E. Kelleher, who helped in the selection and classification of the articles.

¹ Fuhr, J. R., Martin, G. A., and Specht, B. J., *Bibliography on Atomic Line Shapes and Shifts (July 1973 through May 1975)*, Nat. Bur. Stand. (U.S.), Spec. Publ. 366, Suppl. 2, 75 pages (Nov. 1975).

² Fuhr, J. R., Wiese, W. L., and Roszman, L. J., *Bibliography on Atomic Line Shapes and Shifts (1889 through March 1972)*, Nat. Bur. Stand. (U.S.), Spec. Publ. 366, 165 pages (Sept. 1972).

TABLE OF CODE LETTERS AND ABBREVIATIONS

A. Description

1. T—theoretical method
2. E—experimental method
3. C—comment

B. Language

1. Czech.—Czech
2. Fr.—French
3. Ger.—German
4. Pol.—Polish
5. Russ.—Russian

B. BIBLIOGRAPHICAL MATERIAL

1. LITERATURE REFERENCES OF GENERAL INTEREST

1.0. GENERAL ARTICLES ON LINE SHAPES AND SHIFTS (GENERAL THEORIES AND COMMENTS, ETC.)

Theoretical paper: 2551

1.1. PRESSURE BROADENING

Comment: 2527

Theoretical papers: 2526,2528,2587,2626,2642,2664,2665,2721,2728,2780,2842,
2900,2910,2957,2965,3000,3013

1.1.1. Stark broadening and shifts

Comments: 2757,2758,2759,2849

Theoretical papers: 2540,2541,2542,2548,2587,2626,2668,2725,2726,
2744,2896,2936,2947,2992,3069,3080

Combined theoretical-comment: 2659

1.1.1.1. Hydrogen and hydrogen-like (overlapping) lines

Comment: 3077

Experimental paper: 2847

Theoretical papers: 2478,2539,2572,2574,2575,2606,2620,2836,
2856,2883,2913,2920,2984,2987,3065

1.1.1.2. Isolated lines of neutral spectra

Experimental paper: 2596

Theoretical papers: 2533,3061

1.1.1.3. Isolated lines of ionic spectra

Comments: 2468,2736

1.1.1.4. Topics of particular interest

A. Line wings

Comment: 2881

Experimental papers: 2670,2953

Theoretical paper: 2572

B. Effects of collective electric fields

Comment: 2649

Experimental papers: 2567,2738,2811

Theoretical papers: 2635,2673,2819,3072

C. Asymmetries of hydrogenic lines

Experimental papers: 2718,2994

Theoretical papers: 2851,2878

D. Microfield distributions

Theoretical papers: 2473,2540,2560,2631,2646,2656,2725,
2734,2790,2813,2841,2883,2936,2967,
3007,3008,3015

E. Magnetic fields

Theoretical paper: 2772

F. Turbulent plasmas

Experimental paper: 2809

Combined theoretical-comment: 2659

G. Ion dynamics of hydrogenic lines

Experimental paper: 3056

Theoretical papers: 2766,2913,2967

Combined theoretical-comment: 3070

H. Plasma polarization shifts

Comment: 3080

Experimental paper: 2847

I. Stark effect on states above the ionization threshold

Theoretical paper: 2775

J. Small field limit; fine structure

Experimental papers: 2582,3063

K. Relativistic effects

Theoretical paper: 2794

1.1.2. van der Waals broadening

Comments: 2545,2586

Theoretical papers: 2472,2546,2547,2579,2638,2773,2780,2816,2886,2888,
2993,3074

Combined theoretical-comment: 2814

1.1.2.1. Satellite bands

Experimental papers: 2593,2613,2667,2706,2935,3016

Theoretical papers: 2579,2665,2815,2840,3047,3066,3074

1.1.2.2. Polarization effects

Theoretical papers: 2812,2980,3001

1.1.2.3. Fine structure; hyperfine structure

Theoretical papers: 2519,2520,2822,2887

1.1.3. Resonance broadening

Comment: 2562

Theoretical papers: 2482,2544,2647,2648,2660,2681,2833,2834,2876,2965,2976,3024

1.2. BASIC ARTICLES ON DOPPLER AND NATURAL LINE SHAPES

1.2.1. Doppler broadening and shifts

Comment: 2637

Experimental paper: 2749

Theoretical papers: 2524,2597,2616,2634,2654,2747,2777,2911,2938

1.2.2. Natural line broadening

No papers in this category.

1.2.3. Radiation induced broadening

Experimental papers: 2535,2675,2676,2740,2783,2793,2904,2918

Theoretical papers: 2474,2534,2606,2607,2617,2876,2877,2955

Combined theoretical-experimental: 3057

1.3. BASIC PAPERS ON INSTRUMENTAL BROADENING, DECONVOLUTION, SUPERPOSITION OF TWO OR MORE SIMULTANEOUSLY ACTING BROADENING MECHANISMS

1.3.1. Determination of instrumental line profiles; experimental techniques for determining line shapes

Experimental papers: 2118,2471,2477,2589,2592,2739,2787,2825,2903

Theoretical papers: 2465,2639,2722,2741,2765,2781,2835,2898,2962,3071

Combined theoretical-experimental: 1245,2114

1.3.2. Deconvolution

Theoretical papers: 2674,2741,2786,2797,2806,2824,2831,2839,2891,2898,2962,3011,3060,3081

Combined theoretical-experimental: 2591,2961

1.3.3. Superposition of broadening mechanisms

Theoretical papers: 2544,2563,2597,2640,2641,2683,2732,2742,2747,2761,2818,2843,2877,2906,2911,2927,2946,2970,2985,2988,3048,3054,3067

1.3.4. Two-photon and saturation methods

Experimental paper: 2582

Theoretical papers: 2598,2720,2721

1.4. IMPORTANT LINE BROADENING APPLICATIONS

1.4.1. Laser & maser applications

Experimental papers: 2513,2535,2675,2676,2705,2738,2740,2783,2793,
2819,2828,2904,2918,2968,2998,3073

Theoretical papers: 2530,2534,2576,2606,2877,2887,2907,2955,2956,
2957,3014,3069

Combined theoretical-experimental: 2707,2717,2826,2850,2897,3057

1.4.2. Astrophysical applications

Comment: 2986

Experimental paper: 2743

Theoretical papers: 2577,2612,2621,2638,2808,2827,2831,2880,3012,3048,
3054

Combined theoretical-comments: 2708,3006

Combined theoretical-experimental: 2792

1.4.3. Plasma diagnostics

Experimental papers: 2305,2316,2317,2319,2464,2610,2611,2627,2662,
2670,2711,2713,2714,2718,2745,2752,2846,2902,
2912,2974,2995,2998,3021,3023,3059

Theoretical papers: 2600,2709,2751,2884

Combined theoretical-experimental: 2466,2717,2769,2832

1.4.4. Other applications

Combined theoretical-comment: 2557

1.5. OTHER TOPICS INVOLVING LINE SHAPES AND SHIFTS

1.5.1. The line shape in the presence of self-absorption; effects of radiative transfer

Theoretical papers: 2506,2524,2590,2625,2671,2843,2844

Combined theoretical-experimental: 2583,2949,2961

1.5.2. Broadening of scattered radiation

Experimental paper: 2555

Theoretical papers: 2524,2981

Combined theoretical-experimental: 2897

1.5.3. Some important papers on molecular line broadening

Theoretical papers: 2485,2568,2724,2728,2764,2829,2900,2921,2926,2932,
2946,2964,2971,3010,3052,3060

1.5.4. Miscellaneous topics

A. Broadening of x-ray lines

Experimental paper: 2853

B. Light shifts; relaxation

Experimental papers: 2511,2605,2918,3023

Theoretical papers: 2508,2554,2558,2905,2979

Combined theoretical-experimental: 2463,2509

C. Zeeman broadening

Experimental paper: 2937

Theoretical paper: 2577

D. New anomalous redshifts

Theoretical paper: 2799

1.6. REVIEW ARTICLES

1.6.1. General line broadening reviews: 2826

1.6.2. Reviews on pressure broadening: 2119,2306,2470,2528

1.6.2.1. Reviews on Stark broadening: 2480,2484,2578,2784,2785,2967

1.6.2.2. Reviews on foreign gas broadening: 2644

1.7. REFERENCES ON LINE BROADENING TABLES AND BIBLIOGRAPHIES

1.7.1. General line broadening tables: No papers in this category.

1.7.2. Pressure broadening tables: No papers in this category.

1.7.2.1. Special Stark broadening tables: 2515,2784,2785,2992

1.7.2.2. Special foreign gas broadening tables: 2733

1.7.3. Doppler and natural line broadening tables: 2911

1.7.4. Tables of Voigt functions: 2911,2927

1.7.5. Line broadening bibliographies: 2564

2. LITERATURE REFERENCES CONTAINING NUMERICAL DATA

(References on individual elements and stages of ionization,
classified according to broadening mechanism)

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
Ag (Silver)			
<u>Ag I</u>			
van der Waals, E	2899 by Ar	Stark, T,E	2754,2805
	2899 by He	van der Waals, E	2603,2704
	2899 by Ne		by Ar
	2899 by N ₂		2731 by He
van der Waals, T,E	2674 by air-C ₂ H ₂	van der Waals, T,E	3018 by Ar
		Stark-Doppler-natural,	2968
		E	
Al (Aluminum)		<u>Ar II</u>	
		Stark, E	2881,2929
<u>Al I</u>		<u>Ar III</u>	
Stark, E	2316,2923,3049	Stark, E	2479,2630,2881
Stark, T	3050	Stark, T	2941
van der Waals, E	2609 by C ₂ H ₂ -N ₂ O	<u>Ar IV</u>	
		Stark, E	2479,2630
<u>Al II</u>		Stark, T	2941
Stark, E	2923		
Stark, T,E	2510	<u>Ar XVIII</u>	
		Stark, T	2841,3077
<u>Al XIII</u>			
Stark, E	3058	B (Boron)	
Stark, T	2778,3077	<u>B I</u>	
Ar (Argon)		van der Waals-Doppler,	2762 by He
		E	2762 by Ne
<u>Ar I</u>			2762 by Ar
resonance, E	2704,2730		2762 by Kr
resonance, T,E	3018		2762 by Xe
Stark, E	2596,2958		

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
	<u>B II</u>		<u>C IV</u>
Stark, E	2975	Stark, E	2998
Ba (Barium)		Ca (Calcium)	
	<u>Ba I</u>		<u>Ca I</u>
van der Waals, E	2609,2951 by air-C ₂ H ₂ 2609 by C ₂ H ₂ -N ₂ O 3068 by Kr	Doppler, E instrumental, E line broadening, E Stark, E	2817 2817 2817 2817
van der Waals, T,E	3068 by Xe	van der Waals, E	2609 by air-C ₂ H ₂ 2609 by C ₂ H ₂ -N ₂ O 2723,2743 by He 2723 by Ne
	<u>Ba II</u>		
Stark, E	2922	van der Waals, T	2972 by He 2972 by Ne
van der Waals, E	2672 by Ar 2672 by He 2672 by Kr 2672 by Ne 2672 by Xe	Stark-van der Waals, E	2817 by Na
			<u>Ca II</u>
		Doppler, E instrumental, E line broadening, E Stark, E	2817 2817 2817 2522,2817,2885, 2922
		van der Waals, E	2885 by Ar 2581 by He
		van der Waals, T	2814 by H 2570 by He
		Stark-van der Waals, E	2817 by Na
Be (Beryllium)			
	<u>Be III</u>		
Stark, T (see also reference on He sequence)	3004		
	<u>Be IV</u>		
Stark, E	2610		
Stark, T	2851,3004		
Stark, T,E	3017		
C (Carbon)		Cd (Cadmium)	
	<u>C I</u>		<u>Cd I</u>
Stark, E	2753,2807,2982	resonance, E	2584
van der Waals, T	2814 by H	van der Waals, E	2669 by Ar 2802 by He 2669 by NH ₃
	<u>C V</u>		
Stark, T (see also reference on He sequence)	2627		

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
<u>Cd II</u>			2716 by hydrocarbons
van der Waals, T,E	2850 by He	van der Waals, T	1905,2309,2755, 2779,2823,3074 by Ar 2925 by Cs 1905,2779 by He 1905,2755,2779, 2823 by Kr 1905,2779 by Ne 1905,2755,2779, 2780,2823,2925, 3047 by Xe 2969 by Xe
Cl (Chlorine)			
<u>Cl III</u>			
Stark, E	2990		
Stark, T	2939		
Cr (Chromium)			
<u>Cr I</u>			
van der Waals, E	2609 by C ₂ H ₂ -N ₂ O 2314 by He	van der Waals, T,E	
Cs (Cesium)		Cu (Copper)	
<u>Cs I</u>		<u>Cu I</u>	
resonance, E	2959,2978,3016	Stark, E	2316
resonance, T	2976	van der Waals, E	2623 by Ar 2623 by Ne 2674 by air-C ₂ H ₂
Stark, E	2801	van der Waals, T,E	
van der Waals, E	2529,2658,2667, 2716,2804,2837, 2838,2890,2977 by Ar 2716 by CF ₄ 2618,3016 by Cs 2716 by D ₂ 2529,2667,2716, 2804,2890,3076 by He 2716 by H ₂ 2667,2804,2838 by Kr 2529,2658,2667, 2716,2804,2837, 2890 by Ne 2716 by N ₂ 2593,2658,2667, 2798,2804,2838, 2908 by Xe	<u>Cu II</u>	2316
		Stark, E	
		Stark, E	2997
		Stark, E	2990
		Stark, T	2939
		Fe (Iron)	
		<u>Fe I</u>	
		line broadening, T,E	2683
		resonance, E	2663
		Stark, E	2615,2663
		van der Waals, E	2623 by Ar

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
	2663 by CO	van der Waals, T,E	2594 by Ar
	2663 by H		2594 by He
	2917 by He		2594 by Ne
	2623 by Ne	Stark-Zeeman, T	2772
van der Waals, T	2561,2814 by H		
Ga (Gallium)		He (Helium)	
	<u>Ga I</u>	<u>He I</u>	
van der Waals, E	2609 by C ₂ H ₂ -N ₂ O	resonance, E	2730
		resonance, T	3024
		Stark, C	2650,2933
		Stark, E	2514,2516,2552, 2553,2567,2585, 2735,2745,2752, 2819,2845,2854, 2889,2902,2914, 2954,3005,3025
Stark, E	2307,2308,2408, 2466,2483,2565, 2567,2585,2678, 2718,2768,2809, 2821,2934,2974, 2983,2994,2995, 3056,3063	Stark, T	2515,2517,2518, 2612,2653,2710, 2726,2882,3072
Stark, T	2478,2481,2539, 2549,2550,2571, 2580,2620,2635, 2643,2661,2734, 2746,2813,2827, 2842,2856,2878, 2883,2884,2916, 2920,2936,2947, 2984,3007,3008, 3022,3065	van der Waals, E	2730,2895 by He
		Doppler-resonance, T	2732
		Stark-Doppler, E	2953
		<u>He II</u>	
		line broadening, T,E	2960
		Stark, E	2567,2745,2752, 2811,2847,2848, 2879,2952
		Stark, T	2575,2673,2756
Stark, T,C	2573,3070		
Stark, T,E	2318,2651,2810	He (Helium) Sequence	
van der Waals, C	1903 by He	Stark, T	2548
van der Waals, E	3009 by Ar		
	3009 by He		
van der Waals, T	2636 by Ar	Hg (Mercury)	
	2928 by D	<u>Hg I</u>	
	1902,2116,2519, 2520,2636,2712	resonance, T,E	2569
	by He	Stark, E	2909

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>	
van der Waals, E	2538,2894,3051 by Ar 2682 by Cd 2525,2531,2894 by He 2719,2894,2935 by Kr 2682 by Mg 2525,2531,2894 by Ne 2525 by N ₂ 2525,2719,2894 by Xe 2682 by Zn 2115 by Ar 2579 by Kr 2628 by Hg	In (Indium) <u>In I</u> van der Waals, E	2543 by Ar 2543 by He 2310 by Hg	
van der Waals, T		K (Potassium) <u>K I</u> resonance, E resonance, T Stark, E van der Waals, C van der Waals, E	2619 2976 2633,2820,2996 2748 by Ar 2507,2523,2556, 2715 by Ar 2670 by CH ₄ -air 2609 by C ₂ H ₂ -N ₂ O 2523,2556,2715 by He 2523,2556,2715 by Ne 2507,2523,2715 by N ₂ 2645,2779,3002 by Ar 2599,2645,2779, 3002 by He 2779,3002 by Kr 2779,3002 by Ne 2779,3002 by Xe	
van der Waals, T,E				
	I (Iodine) <u>I I</u> van der Waals, E	2624,2750,3073 by Ar 2750 by CF ₂ Cl ₂ 2750 by CF ₃ Br 2750 by CO 2624,2750 by CO ₂ 2750 by C ₃ F ₇ I 2624 by He 2624 by Kr 2624 by Ne 2624,2750 by N ₂ 2750 by SF ₆ 2624 by Xe 2750 by (CF ₃) ₂ CO 2707 by Ar 2707 by CF ₃ I 2707 by CO ₂ 2707 by C ₃ F ₇ I 2707 by SF ₆ 2707 by Xe	Kr (Krypton) <u>Kr I</u> resonance, T resonance, T,E Stark, E van der Waals, T	3024 2601 2596,2958,3064 2638 by Ar 2638 by He
van der Waals, T,E				

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
van der Waals, T,E	3053 by Ar 3053 by He	van der Waals, T	2537 by He
Li (Lithium)		<u>Mg XI</u>	
<u>Li I</u>		Doppler, E	2713
		(see also reference on He sequence)	
Stark, E	2243,2408,2996	<u>Mg XII</u>	
Stark, T	2726,3019	Stark, E	2713,2714
van der Waals, E	2566,2655,3062 by Ar 2566,2655,2830, 3062 by He 2566,2655 by Kr 2566,2655 by Ne 2566,2655 by Xe	Mo (Molybdenum)	
van der Waals, T	2779,3066 by Ar 2519,2536,2779 2972,3066 by He 2779 by Kr 2779,3066 by Ne 2779 by Xe	<u>Mo I</u>	
van der Waals-Doppler, E	2973 by He 2973 by Xe	van der Waals, E	2609 by C ₂ H ₂ -N ₂ O
Mg (Magnesium)		N (Nitrogen)	
<u>Mg I</u>		<u>N I</u>	
resonance, E	2855	resonance, E	2999
Stark, E	2791	Stark, E	2763
Stark, T	2726	Stark, T	2512,2737,3061
van der Waals, E	2919,3026 by Ar 2791 by H 2919,3026 by He 3026 by Kr 2855,3026 by Ne 2919,3026 by Xe	van der Waals, C	1903 by He
van der Waals, T	2537 by He	van der Waals, E	1906 by He 1906 by Ne 1906 by N ₂ 1246,1901 by He
<u>Mg II</u>		<u>N II</u>	
Stark, E	2791,2922	Stark, E	2632
van der Waals, E	2791 by H	Stark, T	2767,2942
		<u>N III</u>	
		Stark, E	2632
		Stark, T	2767
		Na (Sodium)	
		<u>Na I</u>	
		resonance, E	2619
		resonance, T	2976
		Stark, E	2312,2633,2760, 2820,2885,2996

*The numbers refer to paper identification numbers of Part 3.

<u>Description</u>	<u>Reference No.*</u>	<u>Description</u>	<u>Reference No.*</u>
resonance, T,E	2362	van der Waals, T,E	2931 by Xe
Stark, E	2963,2996		
van der Waals, E	2117,2309,2469, 2521,2523,2608, 2622,2666,2667, 2715,2788,2795, 2804 by Ar 2521 by CH ₄ 2469,2523,2608, 2622,2667,2715, 2788,2795,2804 by He 2117,2309,2469, 2521,2608,2622, 2666,2667,2776, 2795,2804,2838, 2948 by Kr 2117,2469,2521, 2523,2608,2622, 2666,2667,2715, 2795,2804 by Ne 2521,2523,2715, 2788,2789 by N ₂ 2117,2309,2467, 2469,2608,2622, 2667,2795,2804, 2838 by Xe 1905,2638,2755, 2773,2779,2823, 2944,3003 by Ar 1905,2638,2645, 2773,2779,3003 by He 1905,2755,2779, 2823,3003 by Kr 1905,2602,2657, 2755,2773,2779, 3003 by Ne 1905,2755,2779, 2823,2892,3003 by Xe		
		Si (Silicon)	
		<u>Si I</u>	
		van der Waals, T	2814 by H
		<u>Si II</u>	
		Stark, E	2604,2966
		Stark, T	2940
		<u>Si III</u>	
		Stark, E	2989
		<u>Si IV</u>	
		Stark, E	2989
		Sr (Strontium)	
		<u>Sr I</u>	
		van der Waals, E	2609,2951 by air-C ₂ H ₂ 2950 by Ar 2945 by CO-N ₂ O 2609 by C ₂ H ₂ -N ₂ O 2950 by H ₂ O 2949 by air-C ₂ H ₂ 2897 by Ar
		<u>Sr II</u>	
		Stark, E	2922
		van der Waals, T	2814 by H 2570 by He
		Ti (Titanium)	
		<u>Ti I</u>	
		van der Waals, E	2609 by C ₂ H ₂ -N ₂ O

*The numbers refer to paper identification numbers of Part 3.

Tl (Thallium)Tl I

Doppler, E	2787
resonance, E	2613
van der Waals, E	2901 by Ar
	2901 by He
	2310 by Hg
	2901 by Kr
	2901 by Ne
	2857 by Tl
	2613,2803,2901
	by Xe

Xe (Xenon)Xe I

resonance, T,E	2601
Stark, E	2596,2958
Stark, T	2930
van der Waals, E	2774 by He
	2727,2774 by Xe
van der Waals, T	2930 by Xe
van der Waals, T,E	3055 by Xe

Zn (Zinc)Zn I

resonance, C	2614
van der Waals, E	2476 by He
	2476 by Xe

*The numbers refer to paper identification numbers of Part 3.

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5. ERRATA

Reference No.*	Corrections or Additions to NBS Special Publication 366, Supplement 2 (1975)
2243	In Part 3, an English translation to the previously cited Russian work is provided. This translation, found in J. Appl. Spectrosc. (USSR) <u>18</u> , 103 (1973), is also incorporated into this supplement.
2362	In Part 3, add the reference Phys. Rev. A <u>16</u> , 1337 (1977). This erratum is incorporated into this supplement.
2408	In Part 3, an English translation to the previously cited Russian work is provided. This translation, found in J. Appl. Spectrosc. (USSR) <u>20</u> , 673 (1974), is also incorporated into this supplement.
2491	In Part 3, add the reference Astron. Astrophys. <u>41</u> , 119 (1975). This erratum is incorporated into this supplement. The entire reference is also given a new number--2561.
2516	In Part 3, add the reference Astron. Astrophys. <u>46</u> , 149 (1976). This erratum is incorporated into this supplement. The entire reference is also given a new number--2644.

*The numbers refer to paper identification numbers of Part 3 of the second supplement to the original bibliography.

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